ABSTRACT

A method for backing up data in a plurality of computers connected via a network. The method includes forming partnerships between the plurality of computers such that each computer in a partnership commits under agreements to help backup the data of its partners. The method further includes periodically verifying that previously backed up data is being retained by the computers committed to act as backup partners in accordance with the agreements. In another embodiment, the method provides a distributed cooperative backing up of data in a system that includes a loose confederation of computers connected via a network. In this embodiment the method includes selecting computers as potential backup partners from among the loose confederation of computers connected via the network based on predetermined criteria, and negotiating a reciprocal backup partnership agreement between the computers based on predetermined requirements, including backup requirements. Once the negotiations are complete and the agreements are made, the method proceeds to form partnerships between the computers. The computers become backup partners by agreeing to cooperatively provide backup services to each other so that a distributed cooperative backing up of data can be administered in the absence of central control. The method further includes periodically backing up data at the backup partners, where the data being backed up is encoded. The method also includes periodically verifying that previously backed up data is retained by the backup partners. Another aspect of the invention is a distributed cooperative backup system that includes a network and a loose confederation of computers connected via the network. A plurality of computers from among the loose confederation of computers is configured for distributed cooperative backing up of data and for functioning as backup partners. Each computer of the plurality of computers has a storage that can be used for providing reciprocal backup services. Each computer of the plurality of computers respectively also has a computer readable medium embodying computer program code configured to cause the computer to perform functions comparable to the method steps as described above.